

WHAT IS CLAIMED IS:

1. An air filter element comprising:
 - (a) first and second, opposite, end caps;
 - (b) filter media;
 - (c) an inner liner defining an open filter interior;
 - (d) said first end cap having an air inlet opening therein;
 - (e) said second end cap having:
 - (i) a central drainage aperture extending therethrough; and,
 - (ii) an interior surface constructed and arranged to direct moisture on said second end cap interior surface to said central drainage aperture.
2. An air filter element according to claim 1 wherein:
 - (a) said second end cap comprises a composite including:
 - (i) an inner insert having a first, inner, surface defining said second cap interior surface and an opposite, second, outer, surface; said inner insert having a central aperture extending therethrough; and,
 - (ii) a compressible polymeric material covering at least a portion of said outer surface of said insert; said inner liner being embedded in said compressible polymeric material; said polymeric material having a central

aperture therein aligned with said aperture in said inner insert, to form said central drainage aperture.

3. A filter element according to claim 2 wherein:
 - (a) said compressible polymeric material comprises a material having an as molded density within the range of 14-22 pounds per cubic foot.
4. A filter element according to claim 3 wherein:
 - (a) said compressible polymeric material comprises polyurethane foam.
5. A filter element according to claim 2 wherein:
 - (a) said inner insert includes a circular trough in said outer surface positioned to extend around said insert central aperture.
6. A filter element according to claim 5 wherein:
 - (a) said insert trough is semi-circular in cross-section.
7. A filter element according to claim 2 wherein:
 - (a) said inner insert includes a plurality of free rise apertures therein; and,
 - (b) a portion of said compressible polymeric material projects through said free rise apertures.

8. A filter element according to claim 7 wherein:
 - (a) each of said free rise apertures is positioned between an associated pair of ridges extending outwardly from said insert first surface.
9. A filter element according to claim 8 wherein:
 - (a) each pair of wall projections comprises first and second, spaced, walls extending along a direction from an outer perimeter of said inner insert toward said central drainage aperture.
10. A filter element according to claim 8 wherein:
 - (a) said inner insert includes a plurality of pairs of wall projections comprising a first set of pairs and a second set of pairs;
 - (i) each pair of said second set of pairs being shorter, in longitudinal extension toward said central drainage aperture, than each pair of said first set of pairs.
11. A filter element according to claim 10 wherein:
 - (a) each pair of said first set of pairs is spaced from each adjacent pair of said first set by a member of said second set of pairs; and,
 - (b) each pair of said second set of pairs is spaced from each adjacent pair of said second set by a member of said first set of pairs.

12. A filter element according to claim 11 wherein:
- (a) said first set of pairs consists of four pairs of walls;
 - (b) said second set of pairs consists of four pairs of walls; and,
 - (c) each pair of walls is evenly, radially, spaced on said inner insert first surface and around said central drainage aperture.
13. A filter element according to claim 12 wherein:
- (a) said inner insert has an outer periphery with a plurality of spaced legs extending outwardly therefrom:
 - (i) said spaced legs projecting axially outwardly from said inner insert in a direction from said inner insert second side.
14. A filter element according to claim 13 wherein:
- (a) each one of said spaced legs has a radially directed foot thereon; each radially directed foot extending away from an associated leg by a distance of at least 0.375 inches.

add
A2
add B1